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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,158	10/24/2003	Shankar Pal	MSFT-2851/306821.01	1679
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EXAMINER				
BETTT, JACOB F				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/693,158

Applicant(s)

PAL ET AL.

Examiner

Jacob F. Betit

Art Unit

2164

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,11-14,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3,5-9,11-14,16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

1. In response to communications filed on 15 February 2008, claims 1, 5, 11, and 16 have been amended per the applicant's request. Claims 1-3, 5-9, 11-14, 16 and 17 are presently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-9, 11 -14, and 16-17 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,721,727, hereafter known as Chau, in view of the applicant admitted prior art[AAPA](Applicants background paras 3-21) or "XML and ASP.NET", and in view of "Introduction to XML Schema" or "Describing your Data: DTDs and XML Schemas.".

Claim 1 is rejected for the following reasons:

defining another class in managed code that represents an XML data type;

defining at least one of the plurality of fields defines of the user defined type, as having the XML data type,(Chau Col 7 lines 8-12 teach having an XML user defined type, Applicants background para 6 and XML and ASP.Net XML Schema Definition Tool (xsd.exe)teach that User defined types are defined in a class in managed code,) and defining at least One other of said plurality of fields as having a different data type (Applicants background discusses fields of

data types different the XML see figure 1, also see Chau figure 3 and XML and ASP.NET Figure 4.17); and

instantiating the class defining the user defined type to create an object of the user defined type, wherein the object holds XML data in said at least one field and holds data of said different data type in said at least one other field; and

persisting the object within a database store (Applicants background paras 18 and 19).

Chau teaches the use of XML. User defined types, but is not explicit to the instantiating of objects, however the AAPA and XML and ASP.net show that these methods were known in the art(See Mapping above) Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use that applicant admitted prior art system in conjunction with Chau, as it allows for compliance with a well known database system.

The limitation of the XML data field having an associated XML Schema that defines a content model for fine XML data in the field(Col 12 line 56- Col 13 line 49, teaches an XML schema (the DAD/DTD) Col 40-49 teaches the documents association with the mapping thus making the dtd associated with the fields), however, it does not expressly disclose XML, Schema. However, Introduction to XML Schema and Describing your Data teach that the XML Schema content model is designed to be a replacement for DTDs and thus it would have been obvious to replace the DTDs with XML Schemas to comply with current practices, as well as having the predictable result of a content model being defined by an XML Schema. See MPEP 2143[R-6].

Claim 2 is rejected for the following reasons:

The method recited in claim 1, wherein the managed code class that represents the XML data type comprises at least one constructor (Chau Col 8 lines 36-41 composing a XML document into a relational table is inherently done by a constructor) and at least one method that returns an object through which the XML data in the field of the persisted. instance of the user defined type can be retrieved (Chau Col 8 lines 36-41 composing an XML document, the returned object, from the relational table) and (AAPA, para 19 and XML and ASP.NET)

Claim 3 is rejected for the following reasons:

The method recited in claim 1, further comprising adding a method to the managed code class definition of the user defined type to implement behavior on the field of the user defined type that is defined as an instance of the managed code class that represents the XML data type (Col 8 lines 1-4 shows that the columns can have user defined functions (or behaviors using the broadest reasonable interpretation) associated with the columns)(Also see AAPA para 19).

Claim 5 is rejected for the following reasons:

The method recited in claim 1, wherein said associating step comprises annotating the managed code class definition of the user defined type with an attribute that identifies the XML Schema on a server that hosts the database store (Col 40-49 teaches the DTDID and that this attribute must be specified, hence it is annotated, to provide the XML User Defined Type Col 9 lines 1-9 teach the DTDs being stored in a table and they are thus part of the server) and as discussed above the AAPA and XML and ADO.NET teach defining the User defined type in a class in managed code).

Claim 6 is rejected for the following reasons:

The method recited in claim 1, further comprising at least one of the steps of: querying an instance of the user defined type persisted within the database store (Col 44 lines 37-44); and modifying an instance of the user-defined type persisted within the database store.

Claim 7, as best understood, is rejected for the following reasons: See Claim 1 Rejection.

Claim 8 is rejected for the following reasons: See claim 2 rejection.

Claim 9 is rejected for the following reasons: See claim 3 rejection.

Claim 11 is rejected for the following reasons: See Claim 5 rejection.

Claim 12 is rejected for the following reasons: See Claim 1 rejection.

Claim 13 is rejected for the reasons: See claim 2 rejection.

Claim 14 is rejected for the following reasons: See claim 3 rejection.

Claim 16 is rejected for the following reasons: See Claim 5 rejection.

Claim 17 is rejected for the following reasons: See Claim 6 rejection.

Response to Arguments

4. Applicant's arguments filed 15 February 2008 have been fully considered but they are not persuasive.
5. In response to the applicant's arguments that "the cited art does not teach or suggest that an 'XML Schema' be associated with **one field** of a plurality of fields of a user defined type, wherein that **one field** has been defined as having an XML data type", the arguments have been

fully considered, but are not deemed persuasive. The claim states “associating said *at least one field* of the instance of the user defined type with an XML schema that defines a content model”. Therefore the claim requires that at least one field be associated with the XML Schema. There is no limitation in claim 1 requiring only one field to be associated with the schema. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the applicant’s arguments directed towards claim 5, the arguments have been considered, but are not deemed persuasive. The applicant is directed to the comments above with regards to the limitation “at least one field”.

In response to the applicant’s arguments that a “managed code class”, a “constructor” that is part of the managed code class, and a “method [that is part of the managed code class and] that returns an object through which the XML data” in a persisted object of a user-defined type can be retrieved, the arguments have been considered, but are not deemed persuasive. A constructor is inherently used when converting data from an XML document into a relational table or when composing the data from a relational table into an XML document. The method of creating the XML document returns an XML object through which the XML data can be retrieved.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Betit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 10:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

jfb
20 May 2008

/Charles Rones/
Supervisory Patent Examiner, Art Unit 2164